

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Currently Amended) A method for selecting a dopaminergic neuron proliferative progenitor cell, wherein the method comprises the step of:

(a) contacting a dopaminergic neuron proliferative progenitor cell marker polynucleotide probe with a cell sample ~~thought to comprise~~ containing a dopaminergic neuron proliferative progenitor cell, wherein the polynucleotide probe ~~comprises~~ consists of a sequence selected from the following nucleotide sequences (1) to (5):

- (1) a nucleotide sequence complementary to a nucleotide sequence of SEQ ID NO: 1;
- (2) a nucleotide sequence complementary to a nucleotide sequence encoding an amino acid sequence of SEQ ID NO: 3;
- (3) a nucleotide sequence complementary to a nucleotide sequence encoding a sequence lacking a transmembrane domain in an amino acid sequence of SEQ ID NO: 3;
- (4) a nucleotide sequence that hybridizes under stringent conditions with a polynucleotide consisting of a nucleotide sequence of SEQ ID NO: 1, wherein said stringent conditions are hybridization in 2X SSC, 0.1% SDS, at 65°C; and,
- (5) a nucleotide sequence comprising at least 15 contiguous nucleotides selected from sequences of (1) to (4); and

(b) selecting a dopaminergic neuron proliferative progenitor cell.

3-17. (Canceled)

18. (Currently Amended) A method for detecting or selecting a dopaminergic neuron proliferative progenitor cell, which comprises the step of:

(a) contacting a cell sample ~~comprising~~ containing the dopaminergic neuron proliferative progenitor cell with a second polynucleotide which hybridizes under stringent conditions with a first polynucleotide consisting of any one of:

- (1) the nucleotide sequence of SEQ ID NO: 1;
- (2) a nucleotide sequence consisting of a polynucleotide encoding a polypeptide consisting of the amino acid sequence of SEQ ID NO: 3;
- (3) a nucleotide sequence consisting of a polynucleotide encoding a polypeptide consisting of an amino acid sequence which lacks a transmembrane region in the amino acid sequence of SEQ ID NO: 3; and
- (4) a nucleotide sequence consisting of a polynucleotide which hybridizes with a complimentary strand of a polynucleotide consisting of the nucleotide sequence of SEQ ID NO: 1 under stringent conditions, wherein said stringent conditions are hybridization in 2X SSC, 0.1% SDS, at 65°C; and

(b) selecting a dopaminergic neuron proliferative progenitor cell.

19. (Original) The method of claim 18, wherein the second polynucleotide comprises at least 15 nucleotides.

20-22. (Canceled)

23. (Currently Amended) A method for producing a postmitotic dopaminergic neuron precursor cell, wherein the method comprises the steps of:

- (1) selecting a dopaminergic neuron proliferative progenitor cell by the method of claim 18 or 19;
- (2) culturing the cell selected in step (1); and

- (3) selecting the postmitotic dopaminergic neuron precursor cell from the cells cultured in step (2).

24. (Currently Amended) A method for producing a dopaminergic neuron, wherein the method comprises the steps of:

- (1) selecting a dopaminergic neuron proliferative progenitor cell by the method of claim 18 or 19; and
- (2) culturing the cell selected in step (1).

25. (Original) The method of claim 24, further comprising the step of:

- (3) selecting a dopaminergic neuron from the cells cultured in step (2).

26-44. (Canceled)